

WHAT IS CLAIMED IS:

1. A remote keyless entry system comprising;
 - (a) a terminal board including:
an operation button for instructing an operation content to be executed by an operation apparatus; and
a communication circuit capable of transmitting instruction data of said terminal board at a plurality of data rates; and
 - (b) said operation apparatus including:
a communication circuit for receiving data transmitted from said communication circuit of said terminal board; and
a control circuit for transmitting the instruction content received by said communication circuit of said operation apparatus to a to-be-controlled equipment into which said operation apparatus is assembled.
2. A remote keyless entry system according to claim 1, wherein said communication circuit of said operation apparatus transmits to said terminal board a data having a lower data rate than the data rate of the data transmitted from said communication circuit of said terminal board.
3. A remote keyless entry system according to claim 1, wherein said communication circuit generates and serially lowers the data rate of communication data.
4. A remote keyless entry system according to claim 3, wherein said terminal board further comprises:

a control circuit for finishing the communication operation at the point when communication is established while the communication is made by serially lowering the data rate by high-speed data transfer.

5. A remote keyless entry system according to claim 3, wherein said terminal board executes a 1-way communication operation when 2-way communication is not established even at a low data rate when said 2-way communication is executed by serially lowering the data rate.

6. A remote keyless entry system according to claim 5, wherein said terminal board further comprises:

a report circuit for reporting to an operator that an operation is made by 1-way communication when said 1-way communication is executed.

7. A remote keyless entry system according to claim 1, wherein said terminal board further comprises:

a display for displaying indicators indicating the present communication data rate.

8. A remote keyless entry system comprising:

(a) a terminal board including:

an operation button for instructing an operation content to be executed by an operation apparatus;

a communication circuit for transmitting instruction data of said operation button to said operation apparatus; and

a switching circuit for switching 1-way

communication and 2-way communication by a manual operation; and

(b) said operation apparatus including:

a communication circuit for receiving the data transmitted from said first communication circuit; and

a control circuit for transmitting the instruction content received by said second communication circuit to a to-be-controlled equipment into which said operation is assembled.

9. A remote keyless entry system comprising:

(a) a terminal board including:

an operation button for instructing an operation content to be executed by an operation apparatus;

a communication circuit for transmitting instruction data of said operation button to said operation apparatus; and

an instruction storage circuit for storing the instruction content instructed by an operator from said operation button; and

(b) said operation apparatus including:

a communication circuit for receiving the data transmitted from said first communication circuit; and

a control circuit for transferring the instruction content received by said second communication circuit to a to-be-controlled equipment into which said operation apparatus is assembled.

10. A remote keyless entry system according to

claim 9, wherein said terminal board further comprises:

a display for reading out and displaying the storage content of said instruction storage circuit; and
an instruction confirmation operation button for giving an instruction for displaying.

11. A remote keyless entry system comprising:

(a) a terminal board including:

an operation button for instructing an operation content to be executed by an operation apparatus; and

a communication circuit for transmitting instruction data of said operation button to said operation apparatus; and

(b) said operation apparatus including:

a communication circuit for receiving the data transmitted from said communication circuit of said terminal board; and

a control circuit for transferring the instruction content received by said communication circuit of said operation apparatus to a to be controlled equipment into which said operation apparatus is assembled;

wherein at least one of said communication circuits can vary the output of communication data.

12. A remote keyless entry system according to claim 11, wherein said communication circuit generates and serially increases the output.

13. A remote keyless entry system according to claim 11, wherein said communication inside said

operation apparatus generates communication data having a higher output than the output of the communication data from said communication circuit inside said terminal board.

14. A terminal board for use in a remote keyless entry system comprising said terminal board and an operation apparatus for executing the content instructed from said terminal board, said terminal board comprising:

an operation button for instructing an operation content to be executed by said operation apparatus; and

a communication circuit capable of transmitting instruction data of said terminal board at a plurality of data rates.

15. A terminal board according to claim 14, wherein said communication circuit generates and serially lowers the data rate of communication data.

16. A terminal board according to claim 15, further comprising:

a control circuit for finishing a communication operation at the point when said communication is established while said communication is effected by serially lowering the data rate by high-speed data transfer.

17. A terminal board according to claim 15, wherein a 1-way communication operation is executed if 2-way communication is not established even at a low

data rate when said 2-way communication is executed by serially lowering the data rate.

18. A terminal board according to claim 17, further comprising:

a report circuit for reporting to an operator that an operation mode is 1-way communication when said 1-way communication is executed.

19. A terminal board according to claim 14, further comprising:

a display for displaying indicators indicating the present data rate.

20. A terminal board for use in a remote keyless entry system comprising said terminal board and an operation apparatus for executing the content instructed from said terminal board, said terminal board comprising:

an operation button for instructing an operation content to be executed by said operation apparatus;

a communication circuit for transmitting instruction data of said operation button to said operation apparatus; and

a switching circuit for manually switching 1-way communication and 2-way communication.

21. A terminal board for use in a remote keyless entry system comprising said terminal board and an operation apparatus for executing a content instructed

from said terminal board, said terminal board comprising:

- an operation button for instructing an operation content to be executed by said operation apparatus;

- a communication circuit for transmitting instruction data of said operation button to said operation apparatus; and

- an instruction storage circuit for storing an instruction content instructed by an operator from said operation button.

22. A terminal board for use in a remote keyless entry system according to claim 21, further comprising:

- a display for reading out and displaying a storage content of said instruction storage circuit; and

- an instruction confirmation operation button for giving an instruction for displaying.

23. A terminal board for use in a remote keyless entry system comprising said terminal board and an operation apparatus for executing a content instructed from said terminal board, said terminal board comprising:

- an operation button for instructing an operation content to be executed by said operation apparatus; and

- a communication circuit for transmitting instruction data of said operation button to said operation apparatus;

wherein said communication circuit can change the output of communication data.

24. A terminal board according to claim 23, wherein said communication circuit generates and serially increases the output.

25. A remote keyless entry system comprising:

(a) a terminal board including:

an operation button for instructing an operation content to be executed by an operation apparatus, including an automatic output mode instruction circuit for instructing an automatic output mode for a communication circuit to output data either continuously or intermittently;

said communication circuit for transmitting instruction data of said operation button to said operation apparatus; and

a control circuit for controlling said communication circuit in such a manner as to execute an automatic output operation when said automatic output mode instruction circuit is operated; and

(b) said operation apparatus including:

a communication circuit for receiving data transmitted from said communication circuit of said terminal board; and

a control circuit for transferring the instruction content received by said communication circuit of said operation apparatus to a to-be-controlled equipment into which said operation apparatus

is assembled.

26. A remote keyless entry system comprising:

(a) a terminal board including:

an operation button for instructing an operation content to be executed by an operation apparatus;

a communication circuit for transmitting instruction data of said operation button to said operation apparatus; and

a control circuit for controlling said communication in such a manner as to execute an automatic output operation for producing either intermittently or continuously an output for a predetermined time after said operation button is pushed for a predetermined time; and

(b) said operation apparatus including:

a communication circuit for receiving data transmitted from said communication circuit of said terminal board; and

a control circuit for transferring the instruction content received by said communication circuit of said operation apparatus to a car into which said operation apparatus is assembled.

27. A remote keyless entry system according to claim 25, wherein said operation apparatus executes again a door lock operation when door lock release is effected in an automatic output mode and when a door opening/closing operation is not effected within a

predetermined time.

28. A remote keyless entry system according to claim 25, wherein said control circuit of said terminal board stops the automatic output operation by an operation end signal from said operation apparatus.

29. A remote keyless entry system according to claim 28, wherein said terminal board further comprises:

a display for displaying an automatic output mode, an automatic output time and the finish of the operation by the operation end signal from said operation apparatus.

30. A remote keyless entry system according to claim 28, wherein said terminal board further comprises:

a report circuit for reporting an automatic output mode, an automatic output time and the finish of the operation by the operation end signal from said operation apparatus.

31. A remote keyless entry system according to claim 25, wherein said operation button of said terminal board includes a manual operation mode instruction circuit for transmitting data when said operation button is operated, and wherein the output is lowered to a level lower than the output of the manual output mode when the automatic output operation is executed by said automatic output operation mode instruction circuit.

32. A remote keyless entry system according to claim 25, wherein said operation button includes a manual operation mode instruction circuit for executing

transmission of data when said operation button is operated, and wherein said operation apparatus lowers a reception sensitivity to a level lower than the reception sensitivity in the manual output mode.

33. A terminal board for use in a remote entry keyless system comprising said terminal board and an operation apparatus for executing a content instructed from said terminal board, said terminal board comprising:

an operation button for instructing an operation content to be executed by said operation apparatus, including an automatic output mode circuit for instructing an automatic output mode during which a communication circuit outputs data either continuously or intermittently;

said communication circuit for transmitting instruction data of said operation button to said operation apparatus; and

a control circuit for controlling said communication circuit in such a manner as to execute the automatic output operation when said automatic output mode instruction circuit is operated.

34. A terminal board for use in a remote keyless entry system comprising said terminal board and an operation apparatus for executing a content instructed from said terminal board, said terminal board comprising:

an operation button for instructing an

operation content to be executed by said operation apparatus;

a communication circuit for transmitting instruction data of said operation button to said operation apparatus; and

a control circuit for controlling said communication circuit in such a manner as to execute an automatic output operation either continuously or intermittently for a predetermined time after said operation button is pushed for a predetermined time.

35. A terminal board according to claim 34, wherein said control circuit of said operation apparatus stops the automatic output operation by an operation end signal from said operation apparatus.

36. A terminal board according to claim 34, further comprising:

a display for displaying an automatic output mode, an automatic output time and the finish of an operation by an operation end signal from said operation apparatus.

37. A terminal board according to claim 34, further comprising:

a report circuit for reporting by sound an automatic output mode, an automatic output time and the finish of an operation by an operation end signal from said operation apparatus.

38. A terminal board according to claim 34, further comprising:

a manual operation mode instruction circuit for transmitting data when said operation button is operated; and wherein

an output is lowered to a level lower than the output in the manual output mode when the automatic output operation is executed by said automatic output mode instruction circuit.

39. A remote keyless entry system comprising:

(a) a terminal board including:

an operation button for instructing an operation content to be executed by an operation apparatus;

a communication circuit for transmitting instruction data of said operation button to said operation apparatus;

a timepiece circuit for measuring the time;

a time setting circuit for setting the time of said timepiece circuit; and

a display for displaying the time; and

(b) an operation apparatus including:

a communication circuit for receiving data transmitted from said communication circuit of said terminal board;

a control circuit for transferring an instruction content received by said communication circuit of said operation apparatus to a to-be-controlled equipment into which said operation apparatus is assembled; and

a reception circuit for receiving time data;
wherein:

said timepiece setting circuit sets the time of said timepiece circuit when said reception circuit transmits the received time data to said terminal board.

40. A remote keyless entry system comprising:

(a) a terminal board including;

an operation button for instructing an operation content to be executed by an operation apparatus;

a timepiece circuit for measuring the time;
and

a circuit for storing an operation instruction set in advance by said operation button and an operation time at which said operation instruction is executed;
and

(b) said operation apparatus including:

a communication circuit for receiving an operation instruction transmitted from said communication circuit of said terminal board and an operation time; and

a control circuit for controlling to-be-controlled equipment, into which said operation apparatus is assembled, in such a manner as to execute said operation instruction at said operation time in accordance with said operation instruction and said operation time received by said communication circuit of said operation apparatus.

41. A remote keyless entry system according to claim 40, wherein said operation instruction is one of door lock, engine start and start of an air conditioner of said controlled equipment.

42. A remote keyless entry system according to claim 40, wherein said terminal board includes a display for displaying the execution of said operation instruction at said operation time.

43. A remote keyless entry system according to claim 40, wherein:

said operation apparatus includes a door lock detection circuit for detecting the lock of doors of said controlled equipment into which said operation apparatus is mounted, and an engine operation detection circuit for detecting an engine operation;

said communication circuit of said operation apparatus transmits door lock alarm data to said communication circuit of said terminal board when door lock is not effected within a predetermined time after the stop of the engine; and

said terminal board displays the door lock alarm.

44. A terminal board for use in a remote keyless entry system comprising said terminal board and an operation apparatus for executing a content instructed from said terminal board, said terminal board comprising:

an operation button for instructing an

operation content to be executed by said operation apparatus;

a timepiece circuit for measuring the time;

and

a circuit for storing an operation instruction set in advance by said operation button and an operation time at which said operation instruction is executed.